



The residential gateway software for operators to grow with

EnsemblePRO is a device software platform with a unique feature-rich toolbox and the perfect instrument to simplify broadband deployment and optimize operations. It allows operators and ISPs to, easily and quickly, create and launch new services as well as optimize operational cost.

The EnsemblePRO software is built with the operator in focus. The features are fully managed by TR-069 and implementation is done to support the operator business model.

A home gateway has to interact in today's connected home ecosystem and must interwork with multiple devices and enable various services. EnsemblePRO let you to do exactly that!

The flexible software is widely deployed and can easily be integrated into any existing operator environment and is already fully interoperable with all major operator systems. It is the key ready solution for operators to start and grow with.

The software offers extensive operator tools to monitor not only the operator network from a gateway perspective, but also the subscriber home environment.

The built in operator log and Wi-Fi monitoring solution are valuable examples of such tools. For the voice services, the software offers extensive logging with quality measures of each call.



EnsemblePro Highlights

- Triple Play Services
 - Full Service routing
 - ALG for home services
- Voice over IP
 - IMS and legacy SIP compliant
 - Full CAT-iq 2.1 feature set
 - Certified CAT-iq software
- Secure Access
 - To the home
 - To the office
 - Wi-Fi hotspot
- Operator Diagnostics
 - Operator log
 - Wi-Fi diagnostics of the home
 - Voice quality and statistics
 - Performance measurements
- Wi-Fi Hotspot
 - LTE off load
 - Public hotspot
- LTE WAN
 - As a fall back solution
 - As a permanent connection
- Smart Home
 - Content sharing
 - ULE
 - Secure VPN access to home

EnsemblePRO Software for Home Gateways

The IOPSYS EnsemblePRO is a modular software supporting a large range of features and functions for residential gateways. The same feature set, look and feel and level of interoperability is available independent of access technology or underlying hardware platform. All services are fully manageable and possible to supervise from the operator ACS.

Network Services

- Service separation
 - Using 802.1p/q, DSCP
 - For Internet, VoIP, Management, IPTV, LAN port (bridge) based services.
- Routed any-port-any-service
 - Internet
 - IPTV (IGMP and RTSP proxy)
 - VoIP (SIP-ALG)
- QoS
 - Port based traffic shaping
 - Service based classification, marking and prioritization
- IP address assignment using
 - Static IP, DHCP and PPPoE, SLAAC
- DHCP Server fully configurable
- Firewall and NAT services
 - Stateful Packet Inspection
 - IPv4 NAT, STUN, UPnP
 - Port forwarding, DMZ, bridge filters
- NTP, DNS proxy
- Dynamic DNS
- IPv6
 - Dual stack
 - DS Lite
 - Internet and Management service
 - SLAAC
 - DHCPv6 client/server

Secure Access

- HTTPS
- SSL
- VPN termination
 - L2TP-LNS, L2TP-LAC
 - L2TP, L2TP/IPSec
 - OpenVPN client and server
- IPSec connection support
- IPSec Server, IPSec Client support
 - Certificate support
- Certificate support
 - Import/Export of certificates via local GUI
 - Self signed certificate generation

Voice Services

- Legacy SIP and IMS support Wi-Fi
- SIP/TLS
- Country specific adaptations
 - Tones
 - Impedances
 - Services
 - Dial plans
- Mid call services
- Supplementary service
 - Locally or in network
 - Using service codes
- VoIP specific services
- Local GUI with
 - Phone book
 - Call lists
 - Service handling
- Multiple (12) VoIP accounts
 - Free association to FXS and DECT HS
- Built in PBX for local calls
- 4 simultaneous call sessions
- Wide band voice support*
- Voice codec support *
 - G.722, G.711, G.723.1, G.726, G.729, AMRNB, codes are subject for platform dependency
- Fax support
 - Using T.38 and G.711

New Generation DECT/CAT-iq/ULE

- GAP and CAT-iq handset support
- Full CAT-iq 2.1 functionality
- Support for SUOTA
- Phone book
- HD voice services
- Up to six connected handsets
- Support for ULE for smart home applications

LTE WAN Access

- Permanent and fail over support
- Manageable via TR-069, local GUI
- PIN, PUK, APN configuration
- Access technology choice
- White list device configuration
- Status, Signal strength
- Location information

3rd Party Application Integration

- LXC container based environment
- API for integratio to Ensemble-PRO services
- Manageable via GUI and TR-069
- SDK for third party development and integration

Wi-Fi Hotspot/Homespot

- Customized open Wi-Fi access solutions
- FON certified solution
- http redirect
- White lists
- EAP radius authentication
- Portal based authentication

Storage Services

- Multiple disks and partitions
- Operator manageable via TR-140
- DLNA, SMB and HTTP based access
- User and group access rights
- White list

Management and Diagnostics

- Auto provisioning scenarios
- Local management
 - Via Web GUI, via phone
- Remote management via TR-069
 - TR-098, TR-104, TR-106,TR-140, TR-143, TR-069 Annex F,G, TR-157
- Software update, configuration, status and statistics via remote management and locally.
- Operator log support following TR-157
 - Network event logging
 - Service logging
 - Active/passive notification to ACS
- Management over IPv4 and IPv6

*hardware dependent

IOPSYS

IOPSYS have created a unique position by developing a world-leading, open-source, hardware-independent software, that enables broadband operators to offer next-generation services in the connected home, independent of CPE platforms.

IOPSYS is a Swedish software company, founded 2018 and headquartered in Stockholm.

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